



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/848,738	05/19/2004	HongQian Karen Lu	76.0878	7330
41754	7590	02/11/2008		
THE JANSSON FIRM 9501 N. CAPITAL OF TX HWY #202 AUSTIN, TX 78759			EXAMINER KANE, CORDELIA P	
			ART UNIT 2132	PAPER NUMBER
			MAIL DATE 02/11/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/848,738

**Applicant(s)**

LU ET AL.

**Examiner**

Cordelia Kane

**Art Unit**

2132

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 61-79 is/are pending in the application.
- 4a) Of the above claim(s) 20-60 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 61-79 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/14/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Claims 20 – 60 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on December 28, 2007.

### ***Information Disclosure Statement***

2. The information disclosure statement filed June 14, 2005 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

### ***Specification***

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Claim Objections***

4. Claim 74 is objected to because of the following informalities: there appears to be a typo for the word to. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant refers to the at least one state and it is unclear which of the at least one state it is referring to, either the states of the host computer or the software module.

7. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant claims a Checking RAS state where the RAS is checked if it has data to transmit. It is unclear what a RAS is.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 1, 18, 61 and 78 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Urien's US Publication 2003/0086542 A1, and further in view of

Carper et al's US Patent 6,480,935 B1. Referring to claims 1 and 61, Urien discloses:

- a. Using a physical link selected from one of several physical link methods (page 5, paragraph 88).
- b. Executing on the resource-constrained device a communications module implementing networking protocols and one or more link layer communication protocols, operable to communicate with a host computer, operable to communicate with remote network nodes (page 5, paragraph 88) and operable to implement network security protocols thereby setting a security boundary inside the resource-constrained device (page 12, paragraph 258).
- c. Executing on the host computer one or more link layer communication protocols operable to communicate with the resource-constrained device and operable to communicate with the remote network nodes (page 5, paragraph 98)

- d. Executing one or more secure network applications on the resource-constrained device wherein the network applications call upon the communication module of the resource-constrained device to communicate with the remote network node wherein the secure network applications are securely accessible by the remote network nodes using un-modified network clients and servers (page 12, paragraph 251).
11. Urien does not explicitly disclose implementing an execution model, wherein the communication module is driven by input events and by the applications and wherein the resource-constrained device uses an optimization technique of swapping data from the non-volatile memory to the random access memory.
12. However, Carper discloses swapping the memory management record from non-volatile memory to the RAM (column 2, line 61-column 3, line 2). Urien and Carper are analogous art because they are from the same field of endeavor, smart cards. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Urien and Carper before him or her, to modify the system of Urien to include the memory swapping of Carper. The suggestion/motivation for doing so would have been so that the memory may be efficiently used and need not be pre-allocated or defined by arbitrary boundaries (column 2, lines 57-60).
13. Referring to claims 18 and 78, Urien discloses that the device is a smart card (Title, page 5, paragraph 87).

14. Claims 2 – 17 and 62 – 77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Urien in view of Carper, and further in view of Chausset et al's "Serial PC/SC Smart Card Reader Application with TDA8029". Referring to claims 2, 3, 62 and 63, Urien in view of Carper discloses all the limitations of the parent claim. Urien in view of Carper does not explicitly disclose the physical link is a full-duplex serial connection using the serial peripheral interface protocol. However, Chausset discloses a serial interface between the TDA8029 and the host controller (page 9).

15. Urien, Carper and Chausset are analogous art because they are from the same field of endeavor, smart cards. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Urien in view of Carper and Chausset before him or her, to modify the system of Urien in view of Carper to include the serial full duplex connection of Chausset. The motivation for doing so would have been to provide the analog electrical interface signals to the smart card (page 7).

16. Referring to claims 4 and 64, Urien in view of Carper discloses all the limitations of the parent claim. Urien in view of Carper does not explicitly disclose connecting an interface device between the resource constrained device and the host computer using a physical link that is a serial connection having half-duplex between the resource constrained device and the interface device and full-duplex between the interface device and the host computer. However, Chausset discloses a device between the smart card and the host computer using a half duplex between the card and the device (page 7) and full duplex between the device and the computer (page 9).

17. Urien, Carper and Chausset are analogous art because they are from the same field of endeavor, smart cards. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Urien in view of Carper and Chausset before him or her, to modify the system of Urien in view of Carper to include the intermediary device of Chausset. The motivation for doing so would have been to provide the analog electrical interface signals to the smart card (page 7).

18. Referring to claims 5, 6, 65 and 66, Chausset discloses performing a bridging function between the half duplex and full duplex modes and enabling the smart card to handle full duplex communication traffic (page 26).

19. Referring to claims 7, 8, 67 and 68, Chausset discloses operating a software module on the interface device according to a finite state machine permitting the interface device to forward messages between the resource constrained device and the network wherein the interface device is in a Send state permitting the resource constrained device to initiate and send messages (page 41, Section 15.3).

20. Referring to claims 9 and 69, Chausset discloses operating a software module on the host computer according to a finite state machine having at least one state permitting the resource constrained device to transmit messages to the network, wherein the software module is in at least one state permitting the resource constrained device to initiate and send messages (page 14).

21. Referring to claims 10 and 70, Chausset discloses the at least one state is corresponding to the interface device transmitting a send command (page 41, section 15.3).



22. Referring to claims 11 and 71, Chausset discloses operating the resource constrained device according to a finite state machine having at least one state in which the resource constrained device waits for a message from the host computer indicating that the resource constrained device may transmit a message (page 14).

23. Referring to claims 12 and 72, Chausset discloses operating the resource constrained device according to a finite state machine whereby the resource constrained device uses the response status at the end of the response to the command sent by the host computer or an intermediate device to indicate that the resource constrained device wants to transmit information to the host computer or to the network (page 14, and 21).

24. Referring to claims 13 and 73, Chausset discloses operating the resource constrained device according to a finite state machine having at least one state in which the resource constrained device waits for a message from the host computer indicating that the resource constrained device may transmit a message (page 14).

25. Referring to claims 14 and 74, Chausset discloses operating the resource constrained device to transition among the states of the finite state machine (page 36, section 15.1.2).

26. Referring to claims 15, 16, 75 and 76, Urien discloses operating the host computer according to a finite state machine having a:

- e. Polling state in which the host computer polls the resource limited device (page 8, paragraph 171).

- f. Get-from-card state in which the host computer obtains packets of data from the resource constrained device (page 8, paragraph 179).
  - g. Putting-to-card state in which the host computer transmits data to the resource constrained device (page 8, paragraph 179).
  - h. Checking RAS state in which the host computer checks whether RAS has any data to transmit to the resource constrained device (page 8, paragraph 171).
27. Referring to claims 17 and 77, Urien teaches operating the host computer to transition among the states of the finite state machine (Figure 4).
28. Claims 19 and 79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Urien in view of Carper, and further in view of Horiguchi US Publication 2001/0051049 A1. Urien in view of Carper discloses all the limitations of the parent claim. Urien in view of Carper does not explicitly disclose the smartcard being a multi media card. However, Horiguchi discloses that a smartcard is a type of multi media card (page 1, paragraph 5). Urien, Carper and Horiguchi are analogous art because they are from the same field of endeavor, smart cards. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Urien in view of Carper and Horiguchi before him or her, to modify the smartcards of Urien in view of Carper to include the multi media cards of Horiguchi. The suggestion/motivation for doing so would have been that smart cards are multi media cards (page 1, paragraph 5).

**Conclusion**

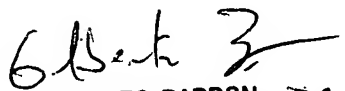
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cordelia Kane whose telephone number is 571-272-7771. The examiner can normally be reached on Monday - Thursday 8:00 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CPK

Cordelia Kane  
Patent Examiner  
Art Unit 2132

  
GILBERTO BARRON JR  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100